



Proposal— the development of a c.1acre site with mixed forestry and horticultural zones.

Contents:

- Soil Type and Classification
- Seasonal Sun
- Restrictions
- Shade analysis
- Site Zoning
- Tree Planting Plan
- Tree Planting Specification
- Grants Available



Peat >50cm

Surface Water Gley
Over middle carboniferous limestone till

Alluvium
Mineral with various textures

Surface Water Gley
Over middle carboniferous limestone till

Soil Types:

Mineral alluvium in North and East quadrants of the site.

This is the best agricultural soil, ideally, gardening and cropping would occur in this area. Minimal working required.

Gley over carboniferous limestone till in South West.

Clay soils hold water and are suitable for planting trees.

Gardening is also possible on this soil type, though amendment would be advised:

- Riddle off stones when soils are dry in Later spring early summer— alternatively collect by hand.
- Compaction by machinery to be avoided if possible.
- Sow green manure and chop and drop in later spring.
- Cover dropped material with layer of manure.



June 21st Midday

Sunrise to Sunset lines

Site is well lit throughout summer though shade is still cast onto the plot from mature hedgerows at dawn and evening.

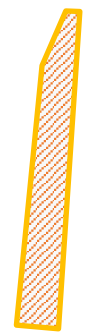
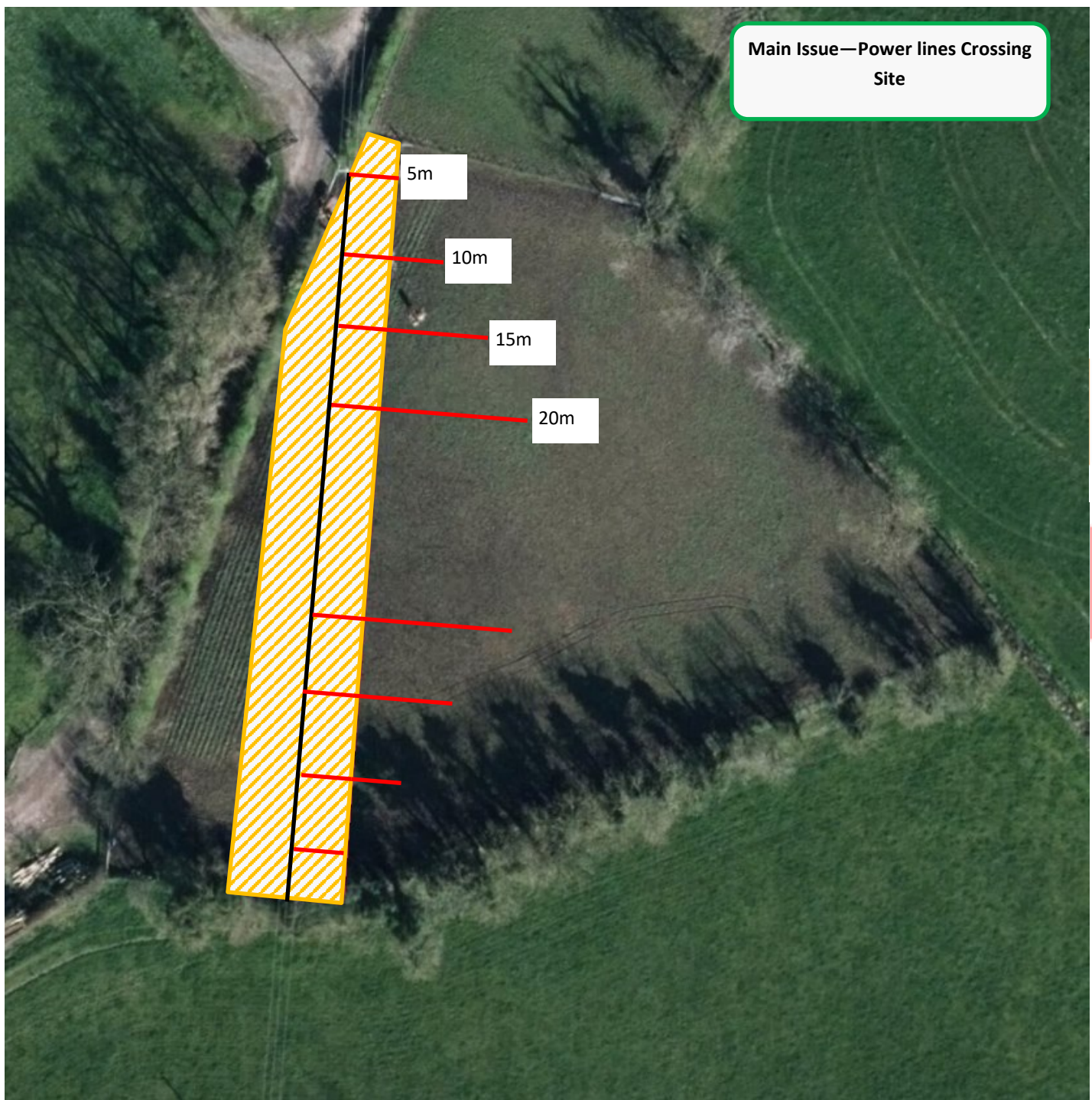


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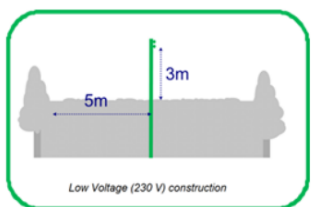
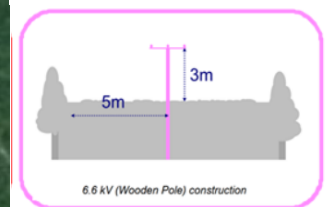
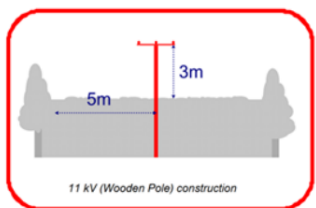
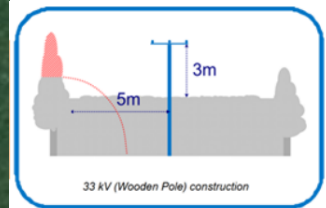
Main Issue—Power lines Crossing Site



Overhead Power lines

0.1ha = 100m²
= 0.24 acre

The shaded zone represents 5m clearance either side. This must be left open for access.



Power line clearance

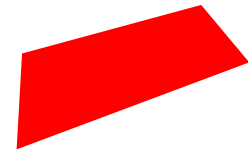
A letter must be sought from NIE detailing the proposal and their agreement in writing before submitting an application to ensure that future line clearance requirements are met.

Please contact:

Ian Peden
Vegetation Programme Team Leader

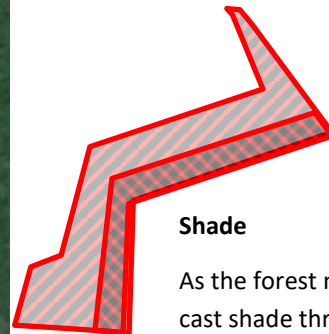
Selected Plan—Trees to the South

Chance of shade after 20 years



Planting Block

A 0.2ha block 10m away from power line.



Shade

As the forest matures, the trees will cast shade throughout the year. The striped section represents winter shade for trees over 25m, the Hatched section represents summer shade for trees over 25m.

Small trees like Birch, Rowan and Hazel could be grown, without oaks or pines, to keep the forest under this height.

Orchard trees could be planted in this area, but would be shaded by

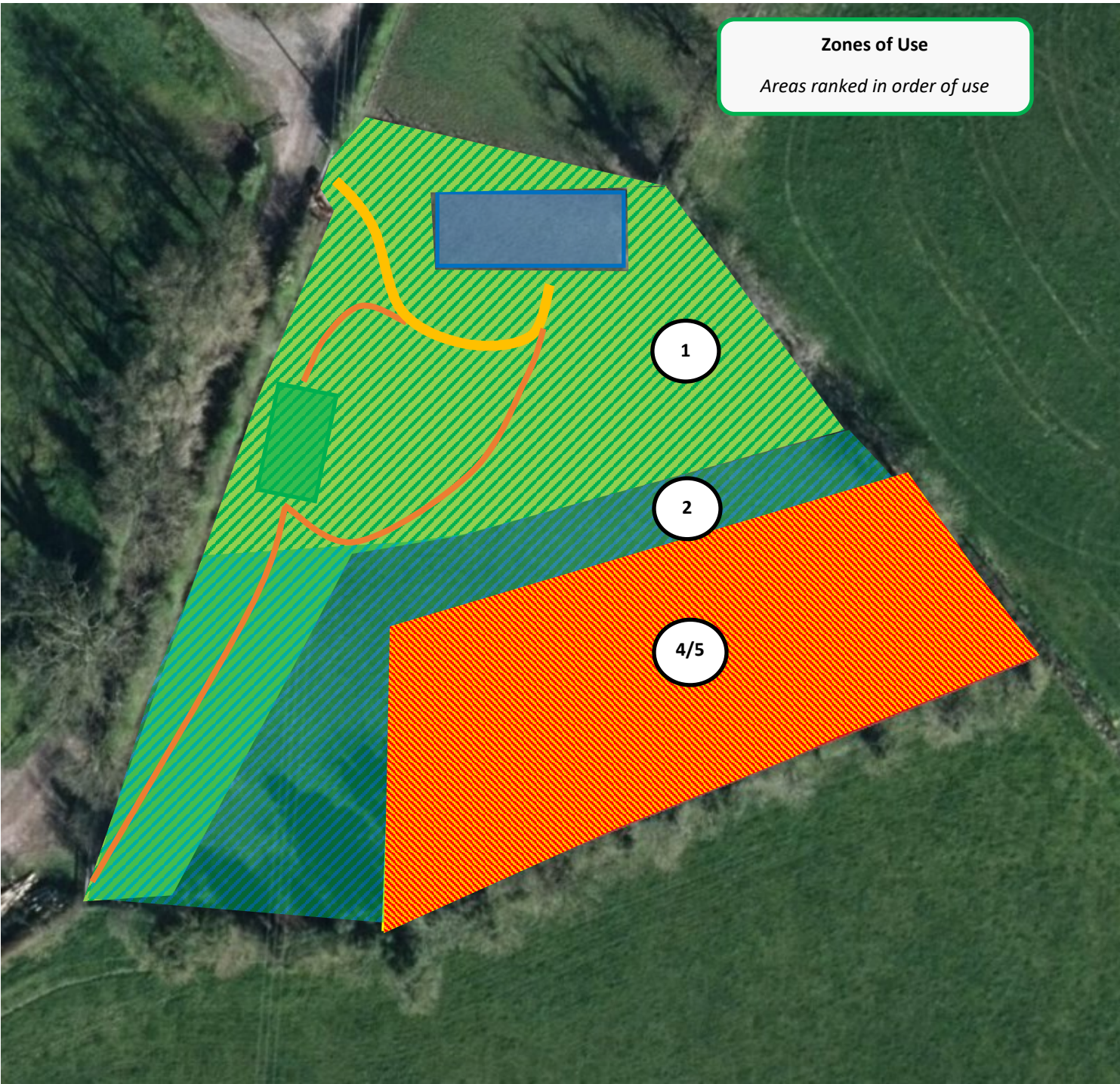


Garden area on alluvial soil.



Garden area on Gley soil

Zones of Use
Areas ranked in order of use



Zones and Desire Lines

Zones are a permaculture design principle that describe how a space will be used, and suggest how plants and activities can be best arranged to maximize benefit and minimize effort. This is an indicative map to initiate a thought process and nothing is set in stone.

Zone 1: Closest to the home and access points and regularly used paths. This is where the most intensive gardening and social use takes place.

Zone 2: Gets a bit less attention.: may be further away, but still perhaps intensively gardened. May include soft fruit, fruit trees, small animals, basketry etc.

Zone 3: Large scale production of grains, main crop vegetables (i.e. potatoes), orchards, agro-forestry, fodder crops for livestock, meadow, pasture

Zone 4: Managed woodland: timber, coppice, forage, wildlife

Zone 5: Places where humans rarely visit, space for wildlife to thrive. .

Desire lines indicate primary (yellow) and secondary (orange) lines of movement through the property.



Planting Plan
 Keeping tall trees out of power line range

For Broadleaves, the recommended planting density is 2600 per hectare. 0.01ha = 100m² and contains 26 trees on 2x2m spacings.

This site requires approx. 520 trees in 0.2ha (2000m²), on 2x2m spacings.

Native Hedge:
 Crab Apple / Elder / Spindle / Alder Buckthorn / Hawthorn / Blackthorn-Mix
 (0.02ha = 52 plants)

Rowan 50% / Hazel 50%
 (0.03ha = 78 plants)
 Target 100 plants

Oak mix 50% Scots Pine 50%
 (0.04ha = 104 plants)
 Target 100 plants

Oak mix 80% / Holly 20%
 (0.05ha = 130 plants)
 Target 150 plants

Downy Birch 50% / Silver Birch 50%
 (0.03ha = 78 plants) Target 100 plants

Alder 50% / Willow 50%
 (0.03ha = 78 plants)
 Target 100 plants



Zone	Tree	Number	Cost (EUR)	Supplier
1	Native Hedge	50	90	Future forests
Or				
1	Mixed thorn	100	57.50	None so Hardy
2	Rowan	50	25	None so Hardy
2	Hazel	50	25	None so Hardy
3	Silver Birch	50	27.50	None so Hardy
3	Downy Birch	50	27.50	None so Hardy
4	Alder	50	27.50	None so Hardy
4	Willows	50	Free	Cuttings
5	Holly	30	66	None so Hardy
5/6	Irish Oak (Petraea)	100	60	None so Hardy
5/6	English Oak (Robur)	100	55	None so Hardy
6	Scots Pine	50	20	None so Hardy

Grants and Funding

The application would be made under the Small Woodland Grant Scheme, when application open again for the 2022 season. Scheme details can be found here:

<https://www.daera-ni.gov.uk/publications/small-woodland-grant-scheme-information-booklet>

Key funding details are shown opposite.

In order to apply for Grant funding from the forest service, you need to apply for a Business ID. Please email the team at the address below to start the process.

customer.forests@daera-ni.gov.uk

They will send you the appropriate form to fill in.

Workflow:

- Apply for a business number with the forestry: Feb 22
- Contact NIE re: exclusion letter for powerline: Feb 22
- Ground preparation: March—May 22
- Apply to SWGS with Forest Service: May—July 22
- Purchase plants (pre-order) - Aug 22
- Fencing : Aug-Sept—22
- Planting: Nov 22—Mar 23
- Claim submitted once work complete.
- Payment before December 23.
- Maintenance (years 1-5)

- Establishment grant:

Standard area based payment of £2,925/ha covering initial preparation, trees (from a defined list), labour, weeding, maintenance, monitoring and protection. 80% of this grant (£2,340/ha) will be claimed in Year 1 and the remaining 20% (£585/ha) will be claimed in Year 5.

- Annual premia:

This is an area based payment of £3,500 /ha (10 annual payments x £350/ha) for woodland creation on agricultural land. The grant is eligible in Years 1- 10. These are payments for income foregone to cover loss of income compared to agricultural production for a maximum period of ten years. The grant rate may be subject to a periodic review.

- Stock fence grant:

A payment rate of £6/m for new stock fencing. This is based on a standard specification detailed in annex 2. 100% of this grant will be claimed in Year 1.

For a 0.2ha plot—funding would break down as follows:

$£2925 * 0.2 = £585$

With £468 paid after establishment in Year 1 and £117 paid in Year 5.

Trees purchased = £405.21

$£585 - £405.21 = £179.79$ for additional costs (tree guards/canes etc.)

Approximately 65m new fence @ £6/m = £390

Total Grant eligible: £585 + £390 = £975